Claims

What is claimed is:

1.   A radio system in a cellular communication system, comprising:

a radio device adapted to transmit data packets over an radio frequency link;

a processor coupled to the radio device;

a memory coupled to the processor, the memory including a data packet transmission queue; and

a transmission ordering component wherein the processor transmits a data packet in the data packet transmission queue having a first destination address over the radio device and the transmission ordering component searches through the queue for a data packet having a second destination address upon an occurrence of an error in the transmitting of a data packet of the first destination address and the processor then transmits the data packet of the second destination address over the radio device.

2.   The system of claim 1, wherein the transmission ordering component advances a packet transmitting pointer to the next data packet in the queue having a different destination address upon an error of the transmission of a data packet that the packet transmitting pointer is currently pointing to in the queue, until the packet pointer reaches the end of the queue.

3.   The system of claim 2, wherein the transmission ordering component reorders the queue upon reaching the end of the queue, such that data packets with destination address in which a transmission error has occurred are move to the beginning of the queue.

4.   The system of claim 3, wherein packet transmission pointer returns to pointing to the beginning of the queue after the queue is reordered.

5.   The system of claim 1, wherein the radio system is an access point system.

6.   The system of claim 1, wherein the radio system is a mobile communication unit.

7.   The system of claim 1, wherein the radio system is a host computer.

8.   The system of claim 1, wherein the transmission ordering component resides in a firmware component of the radio device.

9.   The system of claim 1, wherein the transmission ordering component resides in a driver of the radio device.

10.   The system of claim 1, wherein the transmission ordering component resides in an application program communicatively coupled to the radio device.

11.   The system of claim 1, wherein the transmission ordering component resides in a radio interface task component communicatively coupled to the radio device.

12.   The system of claim 1, wherein the radio device resides at least partially on a PCMCIA card.

13.   A method for transmitting data packets over a radio device in a cellular communication system, comprising:

providing a queue having a plurality of data packets for transmitting over the radio device;

transmitting a first data packet with a first destination address over the radio device;

checking for an error in the transmission of the first data packet with the first destination address;

searching the queue for a data packet having a second destination address upon detection of an error in the transmission of the first data packet with the first destination address; and

transmitting the data packet having the second destination address over the radio device.

14.   The method of claim 13, further comprising advancing to the next location in the queue and transmitting a second data packet for the first destination address upon detection of no error in the transmission of the first data packet with the first destination address.

15.   The method of claim 13, further comprising repeating transmitting of a first data packet for a given destination address and advancing to a location in the queue having a data packet with a different destination address upon detection of a transmission error in the first data packet of the given destination address until reaching the end of the queue.

16.   The method of claim 15, further comprising reordering the queue after reaching the end of the queue by moving data packets with destination address having a transmission error to the beginning of the queue.

17.   The method of claim 16, further comprising repeating of transmitting, checking, searching and transmitting of data packets in the queue after the reordering.

18.   A computer program embodied on a computer readable medium for transmitting data packets over a radio device in a cellular communication system, comprising:

a data packet transmission queue for storing data packets to be transmitted over the radio device; and

a transmission ordering module adapted to transmit data packets one location at a time in the data packet transmission queue until a transmission error occurs, wherein the transmission ordering module advances to a location in the data packet transmission queue having a data packet with a different destination address than the data packet in which the transmission error has occurred.

19.   The computer program embodied on a computer readable medium of claim 18, wherein the computer program runs on an operating system of a computer system.

20.   The computer program embodied on a computer readable medium of claim 19, wherein the computer operating system is one of a Microsoft Windows NT and a Windows CE operating system.

21.   The computer program embodied on a computer readable medium of claim 18, wherein transmission ordering module continues transmitting data packets one location at a time in the data packet transmission queue after advancing to the location in the data packet transmission queue with a different destination address

22.   The computer program embodied on a computer readable medium of claim 18, wherein transmission ordering module reorders the queue after reaching the end of the queue by moving data packets in which transmission errors have occurred to the beginning of the queue.

23.   A radio system in a cellular communication system, comprising:

a personal computer system including a processor and a memory coupled to the processor, the processor running an operating system on the personal computer system;

a radio device coupled to the processor, the radio device residing on a PCMCIA card and adapted to communicate with at least two other radio systems through an RF receiver and transmitter coupled to an antenna; and

a transmission ordering component adapted to transmit data packets stored in a queue in the memory one location at a time until a transmission error occurs, wherein the transmission ordering component advances to a location in the queue having a data packet with a different destination address than the data packet in which the transmission error has occurred.

24.   The system of claim 23, wherein the transmission ordering component resides in a firmware program on the radio device.

25.   The system of claim 23, wherein a radio driver resides on the computer operating system and the transmission ordering component resides in the radio driver.

26.   The system of claim 23, wherein the transmission ordering component resides in an application program communicatively coupled to the radio device.

27.   The system of claim 23, wherein the transmission ordering component resides in a radio interface task component communicatively coupled to the radio device.

28.   The system of claim 23, wherein transmission ordering component continues transmitting data packets one location at a time in the queue after advancing to the location in the queue with a different destination address.

29.   The system of claim 23, wherein transmission ordering component reorders the queue after reaching the end of the queue by moving data packets in which transmission errors have occurred to the beginning of the queue.

30.   The system of claim 23, wherein the radio system is an access point system.

31.   A radio system in a cellular communication system, comprising:

a radio device adapted to communicate with at least two other radio systems over a radio frequency link;

means for storing data packets to be transmitted over the radio frequency link;

means for transmitting the data packets stored in the means for storing data packets over the radio frequency link, the means for transmitting adapted to transmit data packets stored in the means for storing one location at a time until a transmission error occurs, wherein the means for transmitting advances to a location in the means for storing having a data packet with a different destination address than the data packet in which the transmission error has occurred.

32.   The system of claim 31, wherein means for transmitting continues transmitting data packets one location at a time in the means for storing after advancing to a location in the means for storing with a data packet having a different destination address than the one in which a transmission error occurs.

33.   The system of claim 31, wherein the means for transmitting reorders the means for storing after reaching the end of the means for storing by moving data packets in which transmission errors have occurred to the beginning of the means for storing.